DUAL M.S.E. COMPUTER ENGINEERING/MASTER OF BUSINESS ADMINISTRATION

Program Details

Department: Electrical and Computer Engineering
Modality: In-Person
Concentrations: Not Applicable
Semester Hours: 60
Total Years: 3

The mission of the Dual Degree M.S.E. in Computer Engineering/MBA program is to educate working engineers and scientists in the computer engineering and business disciplines that will make them leaders of complex technical endeavors within their sponsoring organizations.

The dual degree M.S.E./MBA program will confer two degrees upon its graduates: an MBA and an M.S.E. in Computer Engineering. Pursuing the dual degree program reduces a student's total number of required semester hours for the two degrees compared to pursuing the two degrees separately.

The dual degree program is designed to be completed in approximately three years. Typically, computer engineering courses are completed first, followed by the required courses in the MBA program.

Learning Outcomes

For the M.S.E. in Computer Engineering

Graduates will:

- Possess in-depth expertise for a successful engineering career and/or a successful undertaking of further graduate level studies, including but not limited to:

  a. an ability to apply advanced knowledge of mathematics, science, and engineering to identify, formulate and solve complex engineering problems in a specialized area, such as computer architecture, embedded systems, computer networks, artificial intelligence, cybersecurity, and systems design.

  b. an ability to apply both analysis and synthesis in the engineering design process, resulting in designs that meet constraints and specifications, which include societal, environmental, and ethical factors as appropriate to the design

  c. an ability to develop and conduct appropriate experimentation and testing procedures using advanced analytical/numerical techniques and/or modern engineering tools, and to analyze and draw conclusions from data

  d. an ability to conduct graduate level research with adequate research skills including information literacy and self-learning

  e. an ability to communicate effectively with a range of audiences through various media

  f. an ability to plan and manage engineering projects, including goal establishment, task scheduling, and risk and uncertainty management

- Meet the challenges of the future through continuing professional growth
- Exhibit concern for social and environmental impact of engineering decisions

For the MBA

- Graduates will possess the knowledge and skills to be able to apply key business concepts in organizational settings.
- Graduates will possess the knowledge and skills to manage in a global economy
- Graduates will possess critical thinking skills and the ability to integrate concepts.
- Graduates will have the ability to communicate effectively.
- Graduates will have the knowledge and skills to function effectively as members, managers, and leaders in the organizations in which they are employed.
- Graduates will be able to incorporate ethical reasoning, social responsibility, and sustainability in making decisions in their organizations.

Admission Requirements

Both the MBA Program in the College of Business Administration and the M.S.E. in Computer Engineering Program in the Frank R. Seaver College of Science and Engineering must accept students applying to the dual degree program for admission.

Prospective dual degree students should apply first to the M.S.E. in Computer Engineering degree program. After receiving admission to the M.S.E. in Computer Engineering degree program and completing a minimum of 12 semester hours towards the M.S.E. degree, students interested in the M.S.E./MBA Dual Degree program should contact the#Director of Academic Affairs, Graduate Business Education for admission to the MBA portion of the Dual Degree. Eligibility for the dual degree program is based upon good academic standing (minimum GPA 3.0) in the M.S.E. in Computer Engineering and approval from their respective Seaver College academic advisor. The preferred start term for the MBA portion of the Dual Degree program is the fall term.

To apply to the M.S.E. in Computer Engineering degree program, applicants must submit the following:

- A completed Online Application (https://graduatestudies.lmu.edu/apply) and $50 application fee
- Official transcripts of all colleges and universities attended
- A statement of intent, including a discussion how the two degrees fit into applicant's career development

Additional coursework may be recommended or required as a condition of admission for applicants that have not completed an undergraduate program in Computer Engineering or Electrical Engineering. Such students are expected to complete undergraduate coursework on Circuits, Logic Design, and Microprocessors/Microcontrollers in order to meet the pre-requisite requirements of the M.S.E. Computer Engineering curriculum. Coursework required as part of terms of admission may not be waived.

Admission Policies

Deferment Policy: Students admitted into this graduate program may defer their admission offer for up to one year from the initial admission entry term. A formal request should be made by the student. Requests

to defer past the one-year mark from the initial admission entry term are reviewed upon request, and the decision is left to the discretion of the Admission Committee.

Appeal Process: The appeal process should be sought after once an admission decision has been provided, and the applicant would like to be reconsidered. To explore the appeal process, the applicant should be prepared to present new evidence of admissibility via new/additional/updated documentation aside from what was presented during the initial admission submission. Such documentation can be in the form of final grades, providing proof of updated relevant course completion and grade/s, etc.

In addition to the documents provided, the student will be required to submit a short essay stating why they are interested in having their application be reconsidered and explain how the new/updated documentation provided shows improvement for admission reconsideration. The admissions team will review the submission of all new documentation and provide the applicant with an updated decision. To request more information about this process, interested candidates in this option may contact SeaverGraduateAdmission@lmu.edu.

Graduation Requirements

(60 Semester Hours)

Students enrolled in the Dual Degree M.S.E./MBA Program are jointly advised by their Seaver College academic advisor and the MBA Program Director in the College of Business Administration. It is recommended that incoming students take 12 semester hours of Computer Engineering courses per fall and spring semester and complete the M.S.E. in year one of the Dual Degree program, then begin the MBA curriculum in year two.

Dual degree students will take a total of 24 semester hours of Computer Engineering graduate-level coursework (i.e., 5000-level or 6000-level courses) and 36 semester hours of MBA courses. 6 semester hours of the MBA courses that are taken as part of the MBA coursework will count toward the M.S.E. in Computer Engineering. Separately, the M.S.E. degree requires 30 semester hours and the MBA degree requires 42 semester hours, for a total of 72 semester hours. The Dual Degree program lessens the load by 12 semester hours.

Suggested Curriculum Flowchart

During the first semester of attendance, the student should prepare a program of study with an academic advisor. A typical arrangement of the 24 semester hours#of required coursework is shown as follows:

Code	Title	Semester Hours
Year 1 (Fall and Spring)		
I. Required courses		
EECE 5140	Computer Architecture with VHDL	4
EECE 5141	Embedded Systems	4
EECE 5270	Wireless Networks	4
II. Select one of the following required options:		
Capstone Option		
EECE 6901	Graduate Capstone Project I	2
EECE 6902	Graduate Capstone Project II	2
Thesis Option [1]		
EECE 6994	Thesis I	2
EECE 6995	Thesis II	2
EECE 6996	Thesis III	2
EECE 6997	Thesis IV	2
III. Electives [2]		
A selection of EECE courses on the 5000- or 6000-level to reach a total of 24 semester hours		
Subtotal [3]		24
Year 2 and beyond [4]		
MBAA 6011	Leadership and Organizational Dynamics	3
MBAA 6021	Financial and Managerial Accounting	3
MBAA 6031	Ethics and the Entrepreneurial Mindset	3
MBAA 6041	Marketing Management	3
MBAA 6061	Global Strategic Management	3
MBAA 6071	Corporate Finance	3
MBAA 6081	Business and Performance Analytics	3
MBAA 6091	Technologies in Business Management	3
MBA Electives		12
Subtotal		36
Total Semester Hours		**60**

1. Preparation of a Master's Thesis is optional and can fulfill 8 semester hours of EECE course requirements. The student selecting the thesis option must obtain a thesis advisor before Departmental consent will be considered, and the thesis must conform to the Frank R. Seaver College of Science and Engineering requirements. The thesis and associated work is intended to advance the state of knowledge in the thesis subject, not "rehash" previous work by others nor a serve as a "literature search." To the extent possible, there should be some experimental work involved. The thesis ideally will form the basis for a paper or article, produced by a student, which would be submitted and hopefully published in a peer-reviewed journal or presented at a professional organization's conference. A thesis is completed after being successfully defended to the thesis committee. The thesis committee consists of the student's thesis advisor, a full-time faculty member from the student's department, and a third member from other than the student's department.
2. 5000-level courses taken as an undergraduate may not be repeated for graduate credit. If a 5000-level course is cross listed with a 6000-level course, graduate students must enroll in 6000-level course. There must be appropriate elective courses to yield at least eight (8) 6000-level EECE hours, including the capstone or thesis courses.
3. **Total M.S.E. Degree Requirement:** 24 semester hours + 6 semester hours from MBA, satisfying the M.S.E. degree requirement of 30 semester hours.
4. **Total MBA Degree Requirement:** 36 semester hours.
The overall minimum GPA required for graduation is 3.0. When the degree requirements for both programs are completed, the student should submit an application for degree in order to be awarded both the MBA and the M.S.E. in Computer Engineering.